IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

BEARBOX LLC and AUSTIN STORMS, Plaintiffs, v. LANCIUM LLC, MICHAEL T. MCNAMARA, and RAYMOND E. CLINE, JR., Defendants.	C.A. No. 21-534-GBW-CJB

PLAINTIFFS' PROPOSED FINDINGS OF FACT

ASHBY & GEDDES
Andrew C. Mayo (#5207)
500 Delaware Avenue, 8th Floor
P.O. Box 1150
Wilmington, DE 19899
(302) 654-1888
amayo@ashbygeddes.com

Attorneys for Plaintiffs
BearBox LLC and Austin Storms

Of Counsel:

Benjamin T. Horton
John R. Labbe
Raymond R. Ricordati, III
John J. Lucas
Chelsea M. Murray
MARSHALL, GERSTEIN & BORUN LLP
233 S. Wacker Drive
6300 Willis Tower
Chicago, IL 60606
(312) 474-6300

Date: January 11, 2023

TABLE OF CONTENTS

TABLE OF ABBREVIATIONS

Abbreviation	Description
Patent or '433 Patent	U.S. Patent No. 10,608,433
Storms	Austin Storms
McNamara	Michael T. McNamara
Cline	Raymond E. Cline
ERCOT	Electric Reliability Council of Texas
DAM	Day-Ahead Market
RTM	Real-Time Market
BTC	Bitcoin
MWh	Megawatts per hour
LMP	Locational Marginal Pricing
Diagram	TX157.0003
Spec Sheet	TX157.0002
Data File	TX157.0008-0025

I. Mr. Storms developed his BearBox cryptocurrency mining system

1. Storms grew up in the New Orleans area and graduated high school in Mandeville, Louisiana. 42:1-12. He earned a degree in geography and GIS from Samford University, worked for an offshore oil and gas company, and worked for Garmin as a GIS analyst. 42:13-43:20. After working for a chain of electronics repair shops in California, he returned to Louisiana in 2017 to pursue cryptocurrency mining. 43:21-45:2. He designed and built a half megawatt datacenter for Bitcoin mining in the building of his father's karate studio, 45:3-46:6, but it was unprofitable due to the price of electricity in Mandeville. 46:7-15.

2. By late 2018, Storms started to develop his "BearBox," a shipping container that would house cryptocurrency miners that could be placed anywhere in the world near inexpensive electricity and be controlled remotely. 46:16-47:24. Storms founded BearBox LLC in 2018 choosing the name because his mobile datacenters needed to be rugged and because cryptocurrency was in a bear market. 40:17-25, 47:3-13. Throughout the second half of 2018 and early 2019, Storms built and tested his system, and wrote software for controlling it. 46:22-52:24. He conceived of, designed, and began building and testing a system for deployment anywhere. Through extensive testing and trial and error, Storms first developed a system of relays, power distribution units, and a computer user interface that allowed him to remotely turn individual miners on and off from anywhere. 46:52-52:13; TX128,

129, 130, 131, 132, 134, 138. He developed this system in his apartment and the workshop of Jason Hutzler, an electrician and a friend. 52:3-4; 48:24-49:10.

3. By April 2019, Storms was writing software for the BearBox system. 52:14-24. Storms contemplated that his mobile boxes could be deployed at renewable generation facilities like windfarms where he thought electricity would be cheap. 47:14-20. Through Twitter, he met Ben Hakes, a representative of GlidePath, a windfarm company. 56:12-58:8; TX15. Storms and Hakes began a discussion over text messages about how Storms might offer a solution to GlidePath to give it an option to mine cryptocurrency when electricity prices are low, while selling wind energy to the grid when prices are favorable. 58:9-60:4; TX14.21. Hakes was initially interested in selling excess wind electricity to Storms for $30 per MW hour and suggested that Storms write software that would turn miners on and off based on the current LMP of electricity. 57:14-22; 59:7-18; 60:23-61:4; TX14.21. Storms conceived of a better idea. He realized that GlidePath had an arbitrage opportunity if it could sell electricity to the grid at opportunistic prices while using its generated electricity to mine Bitcoin at other times. 60:5-63:12; TX14.25. He conceived of a system where GlidePath would have the option to sell electricity to the grid or use electricity for cryptocurrency mining based on the prevailing LMP, price of cryptocurrency, and "hashrate" (the amount of computer power required to mine cryptocurrency at any given time), and he further communicated this idea to

Hakes on April 19, 2019, in an annotated diagram. 63:13-65:1; TX14.27. By April 23, Storms had tested his idea using a simulation to compare "real time LMP vs. network hashrate profitability in 5 min increments," which allowed him to identify LMP price spikes. 65:13-24; 66:11-67:18; TX14.28. He sent Hakes a screenshot of data showing possible profits accounting for factors like LMP, Bitcoin price, and network hashrate, determined in 5-minute intervals. 66:11-67:18; TX143.

4. Storms reduced his idea to practice by writing computer code to implement his ideas. He brainstormed how the code would work on whiteboards, and steadily wrote his code over the next several days, finishing his code by May 7, 2019. 67:19-68:21; 74:18-77:17; TX20, 24, 32, 46, 47, 48, 49; TX139, 140, 144.

5. Storms' system operated on 5-minute intervals to match and be compatible with ERCOT's market interval. 67:1-5; 286:9-290:5; 297:14-298:14; 340:6-21; TX24; TX157.003 and 008. Storms' system retrieved Bitcoin parameters (283:15-286:9; 314:13-15; 315:4-7; 315:21-316:9) and energy price data (288:19-22; 298:15-301:15; 312:3-7; 315:12-18) at the beginning of a 5-minute interval (289:3:-290:5; 297:14-298:14; 311:17-21; 317:4-8; 323:10-14**)**, determined whether to consume energy by mining or to stop, and remained in that state until the next 5-minute interval where it again evaluated those variables and performed those computations. 67:1-18; 340:6-21; TX24; TX157.003 and .008.

6. Storms' system was designed to operate using 272 miners, which he could

power on or off in any number between 1 and 272, through a remote-controlled power distribution unit (PDU). 282:9-283:9; 295:4-10; 293:1-294:20; 278:15-281:2; 322:4-323:14; TX24; TX20.36-38; TX32; TX46; TX 129-132; TX157. Storms' custom PDU acted as an intelligent power strip with relays addressable via associated IP addresses and ports, enabling the miners to be turned on or off by remotely located control software over any physical distance. 323:20-323:1; 308:21-309:5; 313:7-22; 311:22-312:2; 315:8-11; 278:15-281:2; 282:9-283:9; 293:1-294:20; 295:4-10; TX24; TX20.36; TX32; TX46; TX 129-132; TX157.

7. Using open-source cgminer software, Storms could control and check the state of each miner, such as to determine whether a miner is on or off (and thus consuming power) or its recent performance characteristics, to change the frequency at which the miner's processor operates, and the like. 303:7-305:2; 311:7-16; 314:15-22; 370:2-372:25; TX24; TX32; TX46; TX157; TX830.

8. Storms contemplating using various types of miners with different power consumption and performance characteristics, such as the Bitmain S9, Dragonmint T1 and the like. 305:3-307:8; 309:15-310:19; TX24; TX32; TX46; TX157.

9. Storms' system provided automated alerts when miners were turned on or off, or when other events occurred. 301:16-303:6; 312:8-12; TX24; TX20.36; TX32; TX46; TX157. Storms wrote the code for his system, which he ran on his laptop computer, in the Python language. Python is an interpreted language that

provides much greater flexible and adaptability compared to compiled code. 314:8-12; 362:8-17; 381:24-383:23 TX24, TX20; TX32; TX46; TX157.

10. Storms' system monitored RTM LMP and DAM LMP, as well as Bitcoin price, network difficulty, and network hashrate. 283:15-286:9; 288:19-22; 298:15-301:15; 312:3-7; 315:4-316:9; 314:13-15; 318:6-22; 319:20-22; 320:8-15; 322:4-323:14; TX24, TX32; TX46; TX47; TX49; TX157.

11. GlidePath never invested in Storms' technology, deeming it too "revolutionary" for its investors. TX985.1.

II. Storms communicated details about his system to McNamara and Cline

12. On Friday, May 3, 2019, Storms attended a cryptocurrency conference in Boston. 77:18-78:18; TX52.2. He met McNamara of Lancium at a cocktail reception, and attended dinner with McNamara, one other Lancium executive, and a few other conference attendees. 78:19-79:23; 82:14-83:2. He sat across from McNamara at dinner, and McNamara responded favorably to information about Storms' system. 83:3-84:23; 601:13-24. McNamara remembers that Storms discussed his system in the context of a project for Glidepath, a wind farm operator. 601:13-24. McNamara was interested in the logic behind Storms' system. 90:9-90:22. The two agreed to follow up, and did beginning that weekend by text message. 84:24-85:2; 91:19-93:10; TX52.2. McNamara said: "your boxes may have some benefits vs the ones we are doing with JB driver," and "lots of stuff to

collaborate on." TX52.2. He then said: "Storms, can you send me those box design specs please!" TX52.2. Storms responded by email on Thursday, May 9, 2019 providing documentation including an annotated diagram ("Diagram"), a BearBox Product Details Summary ("Spec Sheet") and modeling data ("Data File") for his system (collectively, "Storms Communication"). 93:11-104:23; TX157. McNamara forwarded this email with attachments to Cline, describing Storms as "very competent." TX61; TX770. The Spec Sheet and Diagram show a system where a windfarm has an option, in 5-minute intervals, to sell electricity to the grid or use electricity to mine Bitcoin based on various variables. 94:23-100:13; TX157.3. The Spec Sheet also indicated that Storms' system included a software management layer for managing the system and deciding whether to mine Bitcoin or sell to the grid. 94:7-22. The Data File included data from a simulation based on 5-minute intervals. 100:14-104:23; 167:24-168:15; TX157.8-157.25.

III. Lancium pursued the Patent, naming McNamara and Cline as inventors

13. At an internal October 2019 meeting, Cline recommended that Lancium file the application for the '433 Patent. McNamara learned of this recommendation by email on October 10, 2019. TX82; 243:22-245:12. On October 28, 2019, Lancium filed provisional application 62/927,119, and on December 4, 2019, Lancium filed application 16/702,931, naming McNamara and Cline as the only inventors, claiming priority to the provisional application. Lancium paid a fee to fast-track the

application with "prioritized examination." The claims were allowed on January 27, 2020, and the '433 Patent issued on March 31, 2020. There is no evidence that Lancium investigated inventorship other than to name McNamara and Cline.

IV. Person of ordinary skill in the art

14. A person of ordinary skill in the art holds a degree in electrical engineering, computer science, or a similar field and one to two years of experience in the field of software or an equivalent level of experience, or a Bachelor's degree in electrical engineering, computer science, or a similar field, plus at least two years of experience designing and/or implementing power control systems for datacenters. 276:14-277:3.

V. Storms conceived of and reduced to practice the inventions claimed in the '433 Patent and communicated his inventions to Lancium

1. Claim 1

a. "A system comprising: a set of computing systems . . . configured to perform computational operations using power from a power grid"

15. No later than April 11, 2019, Storms conceived of a system that included a set of computing systems, e.g. cryptocurrency mining computers, configured to perform computational operations, e.g. mine cryptocurrencies, using power from a power grid provided through a remotely-controllable power distribution unit (PDU). 278:15-281:2; 282:9-283:9; 293:1-294:20; 295:4-10; 303:7-307:8; 308:21-310:19; 311:7-312:2; 313:7-22; 314:15-22; 315:8-11; 320:4-7; 322:4-323:14;

335:6-21; TX24; TX20.36; TX32; TX46; TX157.

16. This aspect of claim 1 was communicated to Lancium no later than May 9, 2019 at least because the Storms' Communication describes a control systems' remotely controllable PDU, which enables individual control of the system's 272 miners of varying types, resulting in a maximum amount of power consumption of about 373kw per hour, or about 31 kW per 5-minute interval. 308:21-310:19; 311:7-312:2; 313:7-22; 314:15-22; 315:8-11; 316:10-15; 319:5-18; 320:7-322:3; 322:4-324:1; 324:21-24; 326:2-21. Baer admits that many different versions of Storms' source code ran similar mining simulations at different power levels (kW_load) for different types of miners. 655:15-656:25; TX20.0004; TX24.

17. Storms' Communication, including the Spec Sheet and Data File, showed the systems' 272 miners each consumed about 1.3 kW of energy per hour, for a maximum amount of about 373kw per hour, or about 31 kW per 5-minute interval. 309:14-310:15; 313:21-22; 316:10-15; 319:5-18; 320:7-322:3; 323:10-324: 24; 326:2-21; TX157; *see also* PF 27 (Baer). The Spec Sheet also noted specific types of miners, including a Bitmain S9, Dragonmint T1, or "similar." *Id*.

18. Lancium expert Baer is not an expert in power grids, Ehsani admitted that Figure 2 of the '433 Patent does not show a system with "separate" connections to behind-the-meter and grid power; rather "it's all an integrated grid that benefits from power from different places." 692:7-15; 697:16-24. Storms' Diagram depicts

a system that is similarly connected to the grid because the windfarm is a part of the grid, as defined in the Patent. 691:7-692:1; TX157.3.

b. "a control system configured to: monitor a set of conditions"

19. No later than April 11, 2019, Storms conceived of a system that was configured to monitor a set of conditions, including Bitcoin price, hashrate, network difficulty, the real-time market price for electricity, the DAM price for electricity, power usage and the state of the miners, such as whether a miner was on or off and its recent performance metrics. 283:15-286:9; 288:19-22; 298:15-301:15; 312:3-7; 314:13-15; 315:4-316:9; 318:6-22; 320:8-15; 319:20-22; 322:4-323:14; TX24; TX47; TX49; TX46; TX157. Storms conception is corroborated by contemporaneous documentation, including source code, specifications, diagrams, comma-separated value data files, photographs and email and text messages. *Id*.

20. This aspect of claim 1 was communicated to Lancium on May 9, 2019 at least because the Storms' Communication describes the ability of the system to monitor various conditions, such as RTM LMP, DAM LMP, Bitcoin price, network difficulty, and network hashrate. 312:3-7; 314:13-15; 315:4-316:9; 318:6-22; 319:20-22; 320:8-15; 322:4-323:14; *see also,* PF 27 (Baer).

21. Storms' Communication, including the Spec Sheet, Diagram and Data File, described the network communication abilities for the system, including the capability to receive information and communicate messages. 323:2-5; 312:8-12;

TX157. These capabilities allowed Storms' system to, inter alia, monitor external conditions such as energy price and Bitcoin information, update an administrator when miners are turned on/off, and remotely control the miners. 283:15-286:9; 288:19-22; 298:15-301:15; 312:3-7; 314:13-15; 315:4-316:9; 318:6-22; 319:20-22; 320:8-15; 322:4-323:14; TX157.

22. Storms' Communication, including the Spec Sheet, Diagram and Data File, describes the ability of the system to monitor various conditions, such as RTM LMP, DAM LMP, Bitcoin price, network difficulty, and network hashrate. 312:3-7; 314:13-15; 315:4-316:9; 318:6-22; 319:20-22; 320:8-15; 322:4-323:14; TX157; *see also* PF 27 (Baer).

c. "receive power option data based, at least in part, on a power option agreement, wherein the power option data specify: (i) a set of minimum power thresholds, and (ii) a set of time intervals, wherein each minimum power threshold … is associated with a time interval"

23. No later than April 11, 2019, Storms conceived of a system that was configured to receive power option data, wherein the power option data includes minimum power thresholds, such as the amount of power the BearBox system would be instructed to use, and then obligated to use for a particular time interval, and time intervals, such as the 5-minute increments upon which the BearBox system would reevaluate and reinstruct miners. 282:19-283:9; 289:3-290:5; 297:14-298:14; 309:12-13; 311:17-21; 313:21-22; 316:10-15; 317:4-20; 319:5-18;

320:7-322:3; 322:4-323:14; 324:21-24; 326:2-21; 343:19-344:8; TX24; TX20.36; TX32; TX46; TX157; *see also*, PF27 (Baer). Storms conception is corroborated by contemporaneous documentation, including source code, specifications, diagrams, comma-separated value data files, and email messages. *Id*.

24. This power option data would have been based at least in part on a power option agreement between the wind farm and Mr. Storms, as depicted in TX 157.003. 308:9-20; 312:22-313:16; 317:9-20; 343:19-344:8; 683:6-16.

25. No later than April 11, 2019, Storms conceived of a system including an arrangement between a load (Storms' system) and a power entity (Glidepath's wind farm), including a "power option agreement" between the power entity and the load, under the proper construction of that term. 308:9-20; 312:22-313:16; 317:9-20; 343:19-344:8; 683:6-16; TX157.003; TX1 at 50:27-32 (defining "power option agreement" between load and power generation source (e.g., the wind farm)"). Storms' conception is corroborated by contemporaneous documentation, including source code, specifications, diagrams, comma-separated value data files, and email messages. 282:19-283:9; 289:3-290:5; 297:14-298:14; 309:12-13; 311:17-21; 313:21-22; 316:10-15; 317:4-20; 319:5-323:14; 324:21-24; 326:2-21; 343:19-344:8; TX24; TX157.

26. This aspect of claim 1 was communicated to Lancium on May 9, 2019 at least because the Storms' Communication describes the necessity of the system to

be connected to a power generator and the ability of the system to act as a load for that power generator.308:9-20; 312:22-313:16; 317:9-20; 323:6-9; 343:19-344:8. Storms' Communication, and in particular the Data File, describe the 5-minute intervals over which the system functions, describing mining revenue indicating power utilization at about 31 kW during an associated 5-minute interval and the sell-back revenue indicating a reduction in power usage in the full amount for that 5-minute interval. 309:12-13; 311:17-21; 313:21-22; 316:10-15; 317:4-8; 323:10-324:24; TX157; *see also*, PF27 (Baer).

27. Baer admits that Storms' system only makes mining decisions once every 5 minutes, when Storms' system monitors Bitcoin mining parameters, the power price point for DAM and RTM LMP, and then makes a determination by comparing those price points and the potential profit of mining Bitcoin to determine whether to mine or to sell back to the grid, and that this functionality was shown in the Diagram. 647:5-14; 671:10-672:1; 654:21-25.

28. Storms' Communication, including the Spec Sheet and Diagram, showed remote, fine grain load control of the miners. 309:14-310:19; 308:21-309:5; 311:7-312:2; 313:7-22; 314:15-22; 315:8-11; 322:4-324:1; TX157. This allowed Storms to physically separate the miners from the higher-level control software, enabling miners to be turned on or off from virtually anywhere. *Id*.

29. Storms' Communication, including the Spec Sheet, Diagram and Data File,

describes a system connected to a power generation facility (*e.g.*, a windfarm), which serves as a load for the facility. 323:6-9; 308:9-20; 312:22-313:16; 317:9-20; 343:19-344:8; TX157. In his Diagram, this connection is depicted with a lightning bolt entering an electrical conduit shown as a pipe. *Id*.

30. Storms' Communication, including the Spec Sheet, Diagram and Data File, showed the ability of the system to mine Bitcoin or not mine Bitcoin and to mine Bitcoin at a particular target. 312:3-7; 322:4-327:14; TX157.

31. Storms' Communication, including the Diagram and Data File, describes (1) the system functioning on 5-minute intervals, (2) mining revenue indicating power utilization during an associated 5-minute interval (depicted with orange Bitcoin symbol "B"s on the right of the Diagram) and (3) selling revenue indicating a reduction in power usage for that 5-minute interval (depicted with green dollar signs in the middle of the diagram). 67:1-18; 309:12-13; 311:17-21; 313:21-22; 316:10-15; 317:4-8; 323:10-324: 24; TX 157.

32. Storms' Data File, describes the operation of Storms' source code, showing that for each of eight-hundred twenty five (825) 5-minute intervals, the system monitored conditions, determined a performance strategy using breakeven and revenue generation calculations, and instructed miners to (1) utilize energy to mine or instructed the miners to stop mining when curtailment was required. 67:1-18; 309:12-13; 311:17-21; 313:21-22; 316:10-15; 317:4-8; 323:10-324:24; TX 157. In

822 of those intervals, the system used energy for the duration of that interval to mine Bitcoin, and for 23 such intervals, the miners were instructed to stop mining. *Id*. The system as described in the Data File continuously mines Bitcoin except for limited instances when the miners are instructed to stop consuming power. *Id*.

33. Storms' Diagram depicts a windfarm with an option to sell electricity to the grid or use it (or sell it) to mine Bitcoin. TX157.3. The Diagram shows a pipe with two branches: one connected to the grid where electricity can be sold, and another connected to a Bitcoin mining load where electricity can be consumed to mine Bitcoin. 63:5-10; 64:8-20; 67:6-18; 140:17-142:3; 316:10-15; TX157.3. The Diagram, together with the Spec Sheet and Data File, represent an arrangement for delivery of electricity from the windfarm to the load including terms such as time intervals, price, etc. *Id*.

d. "responsive to receiving the power option data, determine a performance strategy … based on a combination of at least a portion of the power option data and at least one condition …, wherein the performance strategy comprises a power consumption target for the set of computing systems for each time interval … wherein each power consumption target is equal or greater than the minimum power threshold associated with each time interval"

34. No later than April 11, 2019, Storms conceived of a system responsive to receiving power option data, configured to determine a performance strategy, based on a combination of at least a portion of the power option data and at least one condition, wherein the performance strategy comprises a power consumption

target for the set of computing systems for each time interval, wherein each power consumption target is equal or greater than the minimum power threshold associated with each time interval, such as the 5-minute increments upon which the BearBox system would reevaluate and reinstruct its miners whether to consume power by mining or not. 278:15-281:2; 282:9-283:9; 293:1-294:20; 295:4-10; 308:21-309:5; 311:22-312:2; 313:7-22; 315:8-11; 322:4-323:14; 323:18-324:2; 340:6-21; TX24; TX46; TX157.003 and.008.

35. This aspect of claim 1 was communicated to Lancium on May 9, 2019 at least because the Storms' Communication, and in particular the Data File, describe the 5-minute intervals over which the system functions, describing mining revenue indicating power utilization at about 31 kW during an associated 5-minute interval and the sell-back revenue indicating a reduction in power usage in the full amount for that 5-minute interval. 309:12-13; 313:21-22; 311:17-21; 316:10-15; 317:4-8; 323:10-324:24; TX157; *see also* PF 32.

e. "provide instructions to the set of computing systems to perform one or more computational operations based on the performance strategy"

36. No later than April 11, 2019, Storms conceived of a system that provide instructions to the set of computing systems to perform one or more computational operations based on the performance strategy, e.g. mine cryptocurrencies, using power from a power grid provided through a remotely-controllable power

distribution unit (PDU). 278:15-281:2; 282:9-283:9; 293:1-294:20; 295:4-10, 303:7-307:8; 308:21-309:5; 309:14-310:19; 311:7-312:2; 313:7-22; 314:15-22; 315:8-11; 320:4-7; 322:4-324:1; 335:6-21; TX24, TX20.36; TX32; TX46; TX157.

37. This aspect of claim 1 was communicated to Lancium on May 9, 2019 at least because the Storms' Communication describes the control systems' remotely controllable PDU, which enabled fine-grain load control of the systems 272 miners of varying types. 308:21-310:19; 311:7-312:2; 313:7-22; 314:15-22; 315:8-11; 316:10-15; 319:5-18; 320:7-322:3; 322:4-324:1; 324:21-24; 326:2-21; TX157. In one example using Bitmain S9 miners, each miner consumed about 1.3 kW per hour, for a maximum amount of power consumption of about 373kw per hour, or about 31 kW per 5-minute interval (about .1 kW per miner). *Id*. Storms' Communication, and in particular the Data File, describe the 5-minute intervals over which the system functions, describing mining revenue indicating power utilization at about 31 kW during an associated 5-minute interval and the sell-back revenue indicating a reduction in power usage in the full amount for that 5-minute interval. 309:12-13; 311:17-21; 313:21-22; 316:10-15; 317:4-8; 323:10-324:24; TX157; *see also* PF 19, 28 and 32**.**

2. Additional claims

38. Independent Claims 17 and 20 are substantially similar to claim 1, but do not require that energy be from a grid. 369:15-370:1; 373:10-22; TX1.

39. Dependent Claims 2-5 depend from claim 1, and add specific data—power price and parameters associated with the computational operations to be performed—that is monitored and used in determining and implementing a performance strategy. TX1. As explained above with respect to claim 1, Storms' system monitored and used this particular data in the manner recited in the claims. 349:17-354:19; TX24; TX47; TX49; TX32; TX157; Section V(1). Storms' conception is corroborated by contemporaneous documentation, including source code, specifications, diagrams, comma-separated value data files, and email messages. *Id*. Storms also communicated this information to Lancium for the reasons set forth above with respect to claim 1. *Id*.

40. Dependent Claims 6-8, 13-14 and 19 depend from either claim 1 or 17, and add the use of power option data for subsequent intervals, which is used in determining and implementing a revised performance strategy. TX1. As explained above with respect to claim 1, Storms' system used monitored conditions and power option data over multiple, consecutive intervals in the manner recited in the claims. 354:20-359:15; TX24; TX157; TX46; Section V(1). Storms conception is corroborated by contemporaneous documentation, including source code, specifications, diagrams, comma-separated value data files, and email messages. *Id*. Storms also communicated this information to Lancium for the reasons set forth above with respect to claim 1. *Id*.

41. Dependent claims 9-12 and 18 depend from either claim 1 or claim 17, and add conventional features well-known in the art, each of which was incorporated into Storms' system and communicated to Lancium. TX1; 359:16-365:18; 370:2-372:24; TX157; TX830.6-7. For example, claim 9 requires the control system be positioned remotely from the set of miners. *Id*. Storms' system included such functionality via its remotely controllable PDU. 359:20-362:7. Similarly, claim 10 requires the control system run on a mobile computing device, such as Mr. Storms' laptop. 362:8-23. Claim 12 adds that power option data is provided by a QSE, functionality that existed in ERCOT for 20 years. 365:6-18; 193:18-197:7. Storms conception is corroborated by contemporaneous documentation, including source code, specifications, diagrams, comma-separated value data files, and email messages. 359:16-363:22; 370:2-372:24; TX24; TX157; TX830.6-7.

42. Claim 16 depends from claim 1, and adds specific data—"a price of power from the power grid; and a global mining hash rate and a price for a cryptocurrency"—and use that data to determine the performance strategy that instructions miners "to perform mining operations for the cryptocurrency when the price of power from the power grid is equal to or less than a revenue obtained by performing the mining operations for the cryptocurrency." TX1. Storms' system compared mining profitability and instructed miners to mine Bitcoin when mining revenue was greater than the price of power from the power grid as recited in claim

16. 367:13-369:14; Section V(1). Storms also communicated this information to Lancium for the reasons set forth above with respect to claim 1. *Id*.

43. The Data File shows Storms' system compared the revenue obtained by performing mining operations for Bitcoin, and mined Bitcoin in circumstances in which the price of power from the grid (RTM LMP) was equal or less than the revenue obtainable from mining Bitcoin. 309:12-13; 311:17-21; 313:21-22; 316:10-15; 317:4-8; 323:10-324:24; TX 157.

VI. BearBox's expert Mr. Frank McCamant

44. McCamant is an expert in electric utilities and ERCOT electricity markets and was the only such expert to testify at trial. 179:22-180:2; TX983.

45. Demand response contracts are defined by ERCOT and have existed since early 2000. Those contracts include ERCOT accepting a load's offer of an amount of power the load is willing to curtail, the time interval during which the load is willing to curtail, and the price the load is willing to accept from ERCOT for giving ERCOT the option to instruct the load to curtail. The load must be consuming the amount of power offered during the time interval specified, though not for any particular purpose or in any particular way. 189:5-190:13; 194:1-3.

46. ERCOT demand response contracts satisfy the "power option agreement" limitation of the Patent claims as construed by the Court and were well-known and conventional elements at the time of invention. TX17.6-7; 586:4-587:15.

47. Controllable load resources (CLRs) are defined by ERCOT, have existed within ERCOT since the early 2000s, and have participated in demand response contracts within ERCOT, as defined by ERCOT, since about 2010. 196:8-1974.

48. Qualifying a load as a CLR is a process defined by ERCOT at least as early as 2010, and published to the world without restriction. 196:23-197:7. Any load resource, LR or CLR, will curtail its power use if instructed to curtail by ERCOT under a demand response contract, and the load resource may liquidate or "sell-back" the unused, curtailed amount of power into the real-time market, keeping the proceeds of that sell-back. 191:6-192:5; 197:11-14.

49. An electrical grid is an interconnected system of power generators, transmission lines, distribution, and consumers. 180:8-11; TX1 at 1:22-33.

VII. BearBox's expert Dr. Stan McClellan

50. Dr. McClellan is a professor in the Ingrim School of Engineering, electrical and computer engineering program, at Texas State University. 267:24-268:1; TX19. He codirects a connected infrastructure directive that works on energy infrastructure projects and a NASA-associated directive. 268:19-269:18. He developed an internationally recognized senior design curriculum that outlined a framework for designing a solution, as well as validating and documenting that design. 269:19-270:19. His career has focused on distributed systems, including 20 years of experience with smart grid devices and datacenter design. 271:7-274:24.

His work with smart grid technologies enabled grid devices to communicate information over power distribution lines. 273:15-25.

VIII. Lancium's business model and behavior before and after Storms' disclosure

51. Before meeting Storms, Lancium's business was turning Bitcoin miners off when electricity prices were high. Lancium located Bitcoin mining datacenters near renewable generation assets (wind farms) and entered agreements to purchase electricity when prices were below a certain threshold, while turning miners off when prices rose above that threshold. From its inception through at least February 2022, Lancium was not profitable. 212:12-14; 213:3-214:19-1; TX57.

52. Soon after meeting Storms, Lancium began commercializing features to make money when turning Bitcoin miners off and capitalizing on high electricity pricing. Specifically, in August 2019, Lancium began monitoring conditions related to Bitcoin mining profitability and real-time power prices, and creating performance strategies based on those conditions for turning Bitcoin miners off during periods of high price and selling previously purchased power back to the grid (or selling capacity to power entities via demand response contracts). Lancium considered these to be "critical" discoveries Lancium had "previously missed," resulting in "NEW" and "cool" features, the scope of which Lancium was still digesting, giving Lancium "a bigger opportunity [] than [Lancium] realize[d]," and for which there was "practically no limit." TX91.12; TX96.1; TX107.1; TX111.1.

53. McNamara's "little sheet" includes the same information Storms sent in May 2019 regarding monitored Bitcoin price, hashrate, difficulty, miner breakeven values, real-time electricity pricing, and a comparison of profitability for mining Bitcoin and selling unused electricity. 221:7-23; TX157; TX107; 377:8-380:6.

54. After August 2019, Lancium realized that it would receive higher ancillary service award rates from ERCOT, and therefore be paid more money for its load-only CLR participation because Lancium would be the only load-only CLR bidding into those ancillary service programs and, for that reason, Lancium was motivated to quickly obtain the '433 Patent, without proper inventorship diligence, to maintain that monopoly. TX16; TX57; TX105; TX108; TX116; 227:2-15; 242:23-243:21.

55. Lancium raised $150 million from investors based in large part on Lancium's '433 Patent and embodiments of those inventions Lancium commercialized. TX125; 591:25-594:13.

IX. Lancium's theories are inconsistent, contradicted, and unsupported

56. The '632 Application does not include Figure 11 from the '433 Patent. TX163. And, despite Cline's testimony to the contrary, the '632 Application does not mention any cryptocurrency price, miner breakeven values, or mining profitability. TX13; TX163; 446:11-447:18. In contrast, Figure 11 from the '433 Patent depicts the same functionality as Storms' system. 327:21-330:14.

57. Lancium has not provided a clear, corroborated version of its alleged conception of the inventions claimed in the '433 Patent. Lancium originally argued its conception was sometime "prior to the filing [of the provisional application] on October 28, 2019." TX5.7. Lancium then argued "many (and potentially all) of the elements of each of the claims of the '433 patent had been conceived by no later than April 2019." TX5.12. Finally, Lancium admitted that its conception was after Storms' conception, stating that "the full combination of elements claimed in the '433 patent were conceived between August 2019 and October 2019." TX5.33.

58. Lancium admits that even under its theory of conception, many unspecified limitations and combinations of limitations were not conceived of by McNamara or Cline until August 2019 to October 2019. TX5.14 (*e.g.* any limitations "relating to" power option agreements, power option data, determining a performance strategy, and combinations of elements including those limitations, or related limitations were not conceived until "between approximately August 2019 and October 2019.")

59. Lancium admits that it never reduced to practice the inventions claimed in the '433 Patent prior to filing the Provisional Application. TX5.13.

60. McNamara and Ehsani found Storms Data File to be "inscrutable" because the Data File included hard-coded values meaning "there are infinite settled mathematical fomulary that could result in the[] numerical values," though just six

months ago Lancium referred to Storms Data File as nothing more than "trivial math calculations in cell columns." 565:23-566:5;685:23-686:8; D.I. 145, ¶ 52.

61. Lancium's "flash of insight" that it argues substantiates its independent conception is an email reflecting a conversation with Tim Carter of MP2 informing Cline that if ERCOT accepts a Lancium ancillary services offer, then Lancium is obligated to use the amount of power offered at the time it might be curtailed. This "flash of insight" reflects the basic operation of an ERCOT demand response contract as it has existed since 2000. TX526; 189:5-190:13; 194:1-3; 695:20-696:9.

62. There is no evidence that Cline wrote any code that was included in Lancium's software that allegedly practices the inventions claimed in the '433 Patent, nor is there any evidence that Cline wrote any code as part of Lancium's alleged conception of the inventions claimed in the '433 Patent.

63. McNamara does not read or write code and admits that he does not even review Lancium's own code, including Lancium's software that allegedly practices the inventions claimed in the '433 Patent. Nor is there any evidence that McNamara wrote any code as part of Lancium's allegedly conception of the inventions claimed in the '433 Patent. 565:7-10.

X. Lancium's witnesses are not credible

64. McNamara is not credible. His testimony is based on his selective, self-serving memory. Despite being the first named inventor on the '433 Patent, Mr.

McNamara refused to describe his invention during his deposition, and failed to do so at trial. Similarly, despite Lancium issuing a press release regarding an "essential function" of its software allegedly covered by the '433 Patent, McNamara declined to describe that essential function. McNamara testified not once but twice that he was interested only in the price of a metal box to be fabricated by Storms, though at no point during dinner or subsequent text messages, did McNamara ask for pricing information. 563:3-12; 564:10-14.

65. Cline is not credible. Cline was previously accused of stealing technical information about energy-related software he received through emails and presentation materials. Like McNamara, Cline during his deposition declined to describe the "essential function" covered by the '433 Patent and contradicted himself at trial. Further, during his deposition, Cline testified that, at the time he received them, he "may have discussed [] with Michael [McNamara]" Storms Communications. At trial, however, Cline testified that he did not discuss Storms Communications with anyone. Cline also testified that the "date created" on the Data File on his computer was April 2021, even though the only Data File from Cline's computer that Lancium produced in this case has a "date created" date of May 9, 2019. In addition, the filename depicts a "(1)" suffix, indicating that Cline's May 9, 2019 download of the Data File would have been the second time Cline downloaded the file. TX984; 596:9-597:18; 517:3-518:1; 520:23-522:14.

ASHBY & GEDDES

/s/ Andrew C. Mayo
Andrew C. Mayo (#5207)
500 Delaware Avenue, 8th Floor
P.O. Box 1150
Wilmington, DE 19899
(302) 654-1888
amayo@ashbygeddes.com

Attorneys for Plaintiffs
BearBox LLC and Austin Storms

Of Counsel:

Benjamin T. Horton
John R. Labbe
Raymond R. Ricordati, III
John J. Lucas
Chelsea M. Murray
MARSHALL, GERSTEIN & BORUN LLP
233 S. Wacker Drive
6300 Willis Tower
Chicago, IL 60606
(312) 474-6300
bhorton@marshallip.com
jlabbe@marshallip.com
rricordati@marshallip.com
jlucas@marshallip.com
cmurray@marshallip.com

Date: January 11, 2023